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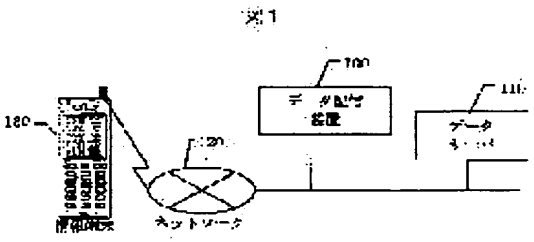
(54) DEVICE AND METHOD FOR DISTRIBUTING DATA

(57)Abstract:
PROBLEM TO BE SOLVED: To solve the problem that data which are not conforming to a format cannot be watched from an information terminal dealing with only a certain specified image data format, and that only small picture data can be watched when a display screen is small.
SOLUTION: In the case of image data to which cannot be handled by an information terminal 130, when there is a request for image data distribution from the information terminal 130, the image data are transmitted to the information terminal 130 after the image data format is converted by a data distributor 100. Besides, an image operating button is added to the data distributor 100 and enlarged image data are transmitted corresponding to the button.



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CLAIMS

[Claim(s)]
[Claim 1] As opposed to the image data demand from the information terminal which is data distribution equipment connected to the network, and was connected to said network An attribute information acquisition means to acquire the attribute information on said information terminal, and an image data recognition means to recognize the image data which can display said information terminal from said attribute information on said acquired information terminal, When it is judged that said demanded image data cannot be displayed at said information terminal with said image data recognition means Data distribution equipment characterized by having an image data-conversion means to change said demanded image data into the image data which said information terminal can display, and a transmitting means to transmit the changed image data to said information terminal.
[Claim 2] As opposed to the image data demanded from the information terminal which is data distribution equipment connected to the network, and was connected to said network The conditions which combined at least one or them among the class of the connection method from said information terminal to said data distribution equipment, the data demand approach, a data specification method, and information terminal, and the class of software in an information terminal, Data distribution equipment characterized by having a setting means to associate and set up image data classification, an image data-conversion means to change into the image data classification which had said demanded image data set up, and a transmitting means to transmit the changed image data to said information terminal.
[Claim 3] The means replaced with the simple data in which it is shown that it is image data about said image data to the image data demanded from said information terminal, The means which relates said demanded image data with said simple data, and a means to add the command which gives an automatic notice from said information terminal to said data distribution equipment if said simple data are chosen at said information terminal, Data distribution equipment according to claim 1 or 2 characterized by having a means to transmit the image data changed by said image data-conversion means to said information terminal when the notice by said command is received.
[Claim 4] Data distribution equipment according to claim 1 or 2 characterized by having a means to record log information, such as time, the amount of data conversion, a count of conversion, a count of a demand, or transform-processing time amount, when all or some of demanded data are changed to the data demand from said information terminal.
[Claim 5] Data distribution equipment according to claim 1 or 2 characterized by having the function to change said demanded image data size small as said image data-conversion means so that said information terminal can be received, or the function to change said demanded image display size into the display size which can display said information terminal.
[Claim 6] Data distribution equipment according to claim 1 or 2 characterized by having the function changed into the image data format which can display said information terminal as said image data-conversion means.
[Claim 7] Data distribution equipment according to claim 1 characterized by having the function which acquires the display screen size of said information terminal as said attribute information acquisition means, and having the image display size conversion function to perform said demanded image data for zooming, a clipping, etc. as said image data-conversion means so that the display size of said information terminal may be suited.
[Claim 8] Data distribution equipment according to claim 1 or 2 characterized by having the function changed into the continuation still picture indicative data which the image data demanded from said information terminal is still picture data as said image data-conversion means, and indicates two or more still picture data by

continuation automatically in said information terminal side when there are another still picture data relevant to said still picture data.
[Claim 9] Data distribution equipment according to claim 1 or 2 characterized by to have the function changed into continuation image-display data so that a continuation indication of a means to divide said demanded still picture data, and the image which divided said demanded still picture may be given by said information terminal side, when the image data demanded from said information terminal is still picture data as said image data-conversion means.
[Claim 10] Data distribution equipment according to claim 1 or 2 which the image data demanded from said information terminal is a video data as said image data-conversion means, and is characterized by having the function to change the still picture which took out and took out one sheet or two or more still pictures into the data format which said information terminal supports from said video data.
[Claim 11] The data distribution equipment characterized by to have an addition means is data distribution equipment connected to a network, and add the actuation command for operating all or some of said demanded data of data from said information terminal to said demanded data to the data demanded from an information terminal, and a transmitting means transmit said demanded data and said added actuation command to said information terminal.
[Claim 12] Data distribution equipment according to claim 11 characterized by having the function in which an actuation demand can be given from said information terminal to said data distribution equipment, as said actuation command, and having a means to perform processing demanded from said actuation demand.
[Claim 13] Data distribution equipment according to claim 11 characterized by having the function to perform actuation processing within an information terminal, as said actuation command.
[Claim 14] Data distribution equipment according to claim 12 or 13 by which it is having [when image data is contained in all or some of data demanded from said information terminal]-as said actuation command-function which expanded or reduces said image data characterized.
[Claim 15] Data distribution equipment according to claim 12 or 13 which is equipped with a means to divide said image data, and is characterized by having the function in which each divided image data can be seen at said information terminal as said actuation command when image data is contained in all or some of data demanded from said information terminal.
[Claim 16] An acquisition means to acquire the attribute information on said cellular phone to the image data demand from the cellular phone which is data distribution equipment connected with the network, and can carry out network connection, An image judging means to judge whether said cellular phone can display said image data from said attribute information, A conversion means to change said image data into the image data which said cellular phone can display when it judges with the ability of said cellular phone not to display said image data with said image judging means, Data distribution equipment characterized by having a transmitting means to transmit said changed image data to said cellular phone.
[Claim 17] An acquisition means to acquire the attribute information on said cellular phone to the image data demand from the cellular phone which is data distribution equipment connected with the network, and can carry out network connection, A judgment means to judge whether said cellular phone can display said image data from said attribute information, A conversion means to change said image data into the image data which said cellular phone can display and which can be displayed, The replacement means replaced with the simple data in which it is shown that it is image data about said demanded image data, The correlation means which relates with said simple data said image data which can be displayed, An addition means to add the command which gives an automatic notice from said information terminal to said data distribution equipment if said simple data are chosen at said information terminal, Data distribution equipment characterized by having a transmitting means to transmit said image data which can be displayed to said information terminal when the notice by said command is received.
[Claim 18] Data distribution equipment characterized by having an addition means to add the actuation command for operating said image data from said cellular phone to said image data, and a transmitting means to transmit the image data which added said actuation command to said cellular phone, to the image data demand from the cellular phone which is data distribution equipment connected with the network, and can carry out network connection.
[Claim 19] Data distribution equipment according to claim 18 characterized by having the function in which an actuation demand can be given from said cellular phone to said data distribution equipment, as said actuation command, and having a means to perform processing demanded from said actuation demand.

[Claim 20] Data distribution equipment according to claim 18 characterized by having the function to perform actuation processing within a cellular phone, as said actuation command.
[Claim 21] Data distribution equipment according to claim 18 to 20 characterized by assigning the expansion function of said image data to 5 as said figure allocation means when it has the figure allocation means which assigns said actuation command to the figure carbon button of said cellular phone and has the expansion function of said image data as said actuation command.
[Claim 22] An image division means to divide the image data demanded from said cellular phone, When it has the function which displays the divided division image data as said actuation command, as a figure carbon button which is equipped with the figure allocation means which assigns said actuation command to the figure carbon button of said cellular phone, and is assigned with said figure allocation means Data distribution equipment according to claim 18 to 20 characterized by assigning [the upper image display / 2 and lower image display] the image display of 6 and the left to 4 for the image display of 8 and the right to the image which is dividing and indicating by current.
[Claim 23] Data distribution equipment according to claim 22 characterized by assigning the image divided into nine to the figure of 1 to 9, respectively as a figure carbon button which has the function divided into nine as said image division means, and is assigned with said figure allocation means.
[Claim 24] An acquisition means to be connected with the camera or camera server which is data distribution equipment connected with the network, and can photo an image through the network, and to acquire the image of said camera or a camera server, Data distribution equipment characterized by having a receipt means to receive the camera image acquisition demand from an information terminal, a conversion means to change the image of said camera or a camera server into the data which can be displayed at said information terminal, and a transmitting means to transmit said changed image data to said information terminal.
[Claim 25] As opposed to the image data demand from the information terminal which is the data distribution approach connected to the network, and was connected to said network The acquisition step which acquires the attribute information on said information terminal, and the display image recognition step which recognizes the image data which can display said information terminal from said attribute information on said acquired information terminal, When it is judged that said demanded image data cannot be displayed at said information terminal by said display-image recognition step The data distribution approach characterized by having the conversion step which changes said demanded image data into the image data which said information terminal can display, and the transmitting step which transmits the changed image data to said information terminal.
[Claim 26] The data distribution approach characterized by having the addition step which adds the actuation command which is the data distribution approach connected to the network, and operates said image data from said information terminal to the image data demanded from the information terminal to said image data, and the transmitting step which transmits said image data and said added actuation command to said information terminal.
[Claim 27] The acquisition step which acquires the attribute information on said cellular phone to the image data demand from the cellular phone which is the data distribution approach connected with the network, and can carry out network connection, The image judging step which judges whether said cellular phone can display said image data from said attribute information, The conversion step which changes said image data into the image data which said cellular phone can display when it judges with the ability of said cellular phone not to display said image data in said image judging step, The data distribution approach characterized by having the transmitting step which transmits said changed image data to said cellular phone.
[Claim 28] The acquisition step which is connected with the camera or camera server which is the data distribution approach connected with the network, and can photo an image through the network, and acquires the image of said camera or a camera server, The reception step which receives the camera image acquisition demand from an information terminal, and the conversion step which changes the image of said camera or a camera server into the data which can be displayed at said information terminal, The data distribution approach characterized by having the transmitting step which transmits said changed image data to an information terminal.

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DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[Field of the Invention] This invention relates to the data distribution equipment which performs data distribution connected to the Internet.
[0002]
[Description of the Prior Art] There is a WWW server to the data demand from each terminal of the Internet as data distribution equipment which distributes data. This WWW server had distributed the demanded data as it was to the demand from the information-display application called the browser which operates at an information terminal. Or in the case of the browser which can display only text data, all data are changed and distributed to text data. Moreover, also in the server which changes a general homepage and is distributed for cellular phones, image data has changed and distributed to text data to the cellular phone which can carry out an Internet connectivity.
[0003]
[Problem(s) to be Solved by the Invention] In the cellular phone which can access the Internet, since only a specific image data format was supported, any image files other than the data format were not able to see in what kind of thing. Moreover, it is small, and since there are also few amounts of memory, a screen cannot display a big image file. Even if it reduced and displayed the big image file, the technical problem that it did not understand well occurred.
[0004]
[Means for Solving the Problem] When the image data which the information terminal does not support from information terminals, such as a cellular phone, is required according to this invention, it changes into the image data which the information terminal supports automatically. Moreover, the data size and the display size of image data are large, and when it cannot display at an information terminal, image data size and a display size are changed small automatically. Moreover, when the display screen of an information terminal is small, since an image may be too small and does not appear, expansion and the carbon button for carrying out sector display are added, and the enlarged display of an image can be made to do an image in having reduced small simply.
[0005]
[Embodiment of the Invention] Hereafter, the gestalt of operation of this invention is explained to a detail based on a drawing.
[0006] Drawing 1 is the system configuration Fig. of a data distribution system. Transmission and reception of the information which went via the network 120 are possible for data distribution equipment 100, and it is equipment which transmits the data demanded by the network 120 course from the information terminal 130. The data which may be stored in data distribution equipment 100 and stored in other servers like the data server 110 are sufficient as the data to transmit. A network and connection are possible for networks, such as the Internet and LAN (Local Area Network), and the information terminal 130, and they are equipment which can acquire data and can be displayed from data distribution equipment 100 by network 120 course. [of the equipment and the network 120 which are storing the data which the data server 110 transmits from data distribution equipment 100]
[0007] Drawing 2 is the flow chart of the fundamental data message distribution processing (210) which data distribution equipment 100 performs. Data distribution equipment 100 receives the information acquisition demand from the information terminal 130 via a network 120 (step 220). It judges whether data distribution equipment 100 has demanded data in the self-server 100 (step 230), and if there is nothing to a self-server,

data will be acquired from the data server 110 (step 240). And data are sent to the information terminal 130 (step 250). For example, when data distribution equipment 100 is a WWW server, it is the Internet, LAN (Local Area Network), etc. as a network, and an information acquisition demand is performed from the information terminal 130 using the display application called a browser. When the WWW server 100 receives an information acquisition demand, the page of the demanded Internet address is transmitted to the information terminal 130, and the browser of the information terminal 130 displays. Here, there are text data, voice data, image data, etc. as data demanded from an information terminal.

[0008] Drawing 3 is a flow chart showing data-conversion transmitting processing (310). Data distribution equipment 100 receives the data distribution demand which contained image data from the information terminal 130 (step 320). In this data distribution demand, the attribute information on the information terminal 130 is also contained. For example, data distribution equipment 100 is a WWW server, and if it is the data distribution demand from the browser in the information terminal 130, the class of browser, the model name of an information terminal, etc. are included in the header of the data distribution demand message. Data distribution equipment 100 acquires the demanded image data, when the demanded data are in the data server 110 (step 330). Data distribution equipment 100 is judged based on the attribute information on the information terminal 130 received [whether the data acquired from the data server 110 can express as the information terminal 130, and] at step 320 (step 340). Here, when a connection method with data distribution equipment 100, a data specification method, etc. change with classes of information terminal 130, you may judge on the condition. For example, when URL in the case of connecting from a cellular phone differs from URL connected from a personal computer in the case of the Internet homepage, it is judged as what is connected from the cellular phone by the URL. When image data cannot express as an information terminal (step 340, NO), it judges whether image data format differs as a reason which cannot be displayed (step 350). When image data format differs, image data format is transformed into the format which the information terminal 130 can display (step 360). In step 350, image data format performs other transform processing (step 370) after conversion of image data at step 360, when the same. As for other transform processing, modification of image data size, modification of image data display size, modification of the color number of image data, etc. are included. The data which performed the above image data-conversion processing are transmitted to the information terminal 130 (step 380).

[0009] Moreover, when using data distribution equipment 100 as equipment for the specific information terminals which exist [cellular phone], the judgment (step 340) of whether to be able to express image data as the information terminal 130 in the data-conversion transmitting processing 310 of drawing 3 is unnecessary, and may surely perform transform processing of image data. For example, by the case where the information terminal 130 is a cellular phone, it may conclude that the information terminal 130 which connects data distribution equipment 100 with data distribution equipment 100 when it systematizes for cellular phones and as a WWW server is a cellular phone, and may change into the image data which can surely display image data with a cellular phone, and you may transmit to a cellular phone.

[0010] When there is a Request to Send of the image data which cannot display the information terminal 130 according to the gestalt of this operation, automatic conversion is carried out and it transmits to the format that the information terminal 130 can display image data format to the information terminal 130. This becomes possible to see the outline of image data also by the image data which cannot be displayed at the information terminal 130. Moreover, to the image data format which the information terminal 130 supports, in order to carry out automatic conversion, it is not necessary to create the image data from which a format differs for various information terminals, respectively.

[0011] Below, an image data distribution system is explained. Drawing 4 is the system configuration Fig. of an image data distribution system. The camera server 410 accumulates the image photoed with the camera 440, and is equipment which can distribute the photoed image to a network. Data distribution equipment 400 acquires the image of the camera server 410 periodically, and if there is a demand from the information terminal 430, it can transmit the image. It is networks, such as the Internet and LAN, and it is connectable with a network, and from data distribution equipment 400, data acquisition of the network 420 can be carried out, and it can display the information terminal 430.

[0012] Drawing 5 is the flow chart of real-time image data message distribution processing (510). It judges whether the image of real time is demanded as data distribution equipment 400 receiving the image data demand from the information terminal 430 (step 530). (step 520) When the real-time image is being demanded, the current image under photography is acquired from (step 530, Yes), and the camera server 410 with a camera 440 (step 540). For example, if the camera server 410 has distributed the image with the function of a

WWW server, data distribution equipment 400 can acquire image data from the camera server 410 by having the function of a browser. When the camera server 410 can use only an original protocol, data distribution equipment 400 acquires image data according to the protocol of the camera server 410. Moreover, in the case of still picture data, in the case of dozens of sheets and a video data, the data for several seconds to dozens of seconds are acquired from one sheet as image data to acquire. The image data acquired from the camera server 410 or the image data which data distribution equipment 400 stored is changed into the data which the information terminal 430 can display (step 550). And image data are transmitted to the information terminal 430 (step 560). Finally, logs, such as conversion time, changing agency size of image data, after [conversion] size, and a count of transmission, are stored (step 570). Here, when the data to transmit are large, the text data related with image data or an image data with small size may be transmitted instead of image data at step 560. When the data transmitted instead of image data at the information terminal 430 are chosen, the data changed at step 550 are transmitted. By doing in this way, it can check to a user whether big data are sent truly.

[0013] Drawing 6 is the flow chart of the video data message distribution processing 610 transmitted to the information terminal 430 by using as an animation the image photoed with the camera 440. If the animation data acquisition demand from the information terminal 430 is received (step 620), the demanded video data will judge whether it is real time (step 630). When the demanded video data is real-time data (step 630, Yes), the present image is acquired from the camera server 410 (step 640). The video data which can be expressed as the information terminal 430 is created from the image data acquired from the camera server 410, or the image data stored in data distribution equipment 400 (step 650). For example, the image data acquired from the camera server 410 are a video data, and the information terminal 430 will change into the animation data format which can display the information terminal 430, if playback of a different video data of a format is possible. The image data acquired from the camera server 410 are a video data, if playback of the video data of continuation still picture display form is possible for the information terminal 430, the still picture data of two or more sheets will be created from the video data acquired from the camera server 410, and the video data of continuation still picture display form will be created from the still picture data of two or more sheets. The image data acquired from the camera server 410 are still picture data, if playback of the video data of continuation still picture display form is possible for the information terminal 430, the still picture data of two or more sheets will be acquired from the camera server 410, and the video data of continuation still picture display form will be created from the still picture data of two or more sheets. And the image data changed into the information terminal 430 is transmitted (step 660). Logs, such as time, translation data size, transmitting record, etc. which carried out image transformation to the last, are stored (step 670).

[0014] According to the gestalt of this operation, image data can be seen now by carrying out data conversion with data distribution equipment 400 also from the information terminal 430 which does not support the image format of the camera image distributed from the camera server 410. Moreover, even if the camera server 410 has distributed only the still picture, signs that the image photoed with the camera 440 moves can be seen also at the information terminal 430 by changing into a continuation still picture display format from the still picture of two or more sheets.

[0015] Moreover, the video data transmitting processing 610 may be applied, the still picture of one sheet may be divided and expanded, it may be made two or more still pictures, and the data of continuation still picture display form may be created from the still picture. Since the display which divided the still picture of one sheet appears continuously when it does in this way, it becomes possible to see the whole, without reducing an image also on small screens, such as a cellular phone.

[0016] Drawing 7 is the flow chart of the actuation means attached processing 710 which adds the user interface for operating image data at the time of data distribution to an information terminal. A system configuration is explained using drawing 1 . First, data distribution equipment 100 receives the Request to Send of the data 810 containing the text and image data of drawing 8 from the information terminal 130 (step 720). When data 810 are in the data server 110, data 810 are acquired from the data server 110 (step 730). And transform processing of image data 830 is performed (step 750). Here, the system construction of the data distribution equipment 100 shall be carried out so that there may be only a data demand from a certain specific information terminal 130. Therefore, it judges with the ability not to express as the information terminal 130, changes into the image data format which can display the information terminal 130, and changes into the size which can also display image display size at the information terminal 130 (step 750). And the screen-display data 940 currently displayed on the information terminal 130 of drawing 9 are created from the data 810 demanded from the information terminal 130 (step 760). In this, text data 920 is the same as the text data 820

in the demanded data 810. Image data 930 is data which changed the demanded image data 830 at step 750. An arrow head (931-939) is an image data manipulation carbon button, and is data added with data distribution equipment 100. This image data manipulation carbon button (931-939) is a carbon button which displays the image data to which only the pushed location was expanded. For example, selection of the image data manipulation carbon button 931 displays Screen 1040 of drawing 10 . Moreover, the numerical keypad (950-959) of the information terminal 130 is assigned to the data manipulation carbon button (931-939), and it is the same as choosing the image data manipulation carbon button 931 to push a figure 1 (951). In order to create the data 1040 currently displayed on drawing 10 , each image data (841-849) which divided image data 830 into nine is created (step 770). And the screen data for a division display which added the image data manipulation carbon button (1031-1039) to each divided image data (841-849) are created (step 780). With the gestalt of this operation, since it is nine division, nine kinds of screen data for a division display are created to each split screens. If each arrow head of the screen-display data created at step 760 is pushed, it will come to call the screen data for a division display created at step 780. And the created screen data 940 are transmitted to the information terminal 130 (step 790). What is necessary is just to assign a numerical keypad (950-959), although division image data (841-849) is displayed in 9 division here. In addition, the numerical keypad 950 of 0 is a function which returns in front. However, beyond it, by choosing each arrow head, in division, it scrolls in the direction of an arrow head and it is seen to use a figure 5 (955) as an expansion carbon button, and see an vertical and horizontal division image. Assignment of this number-of-cases character key (950-959) becomes the same as arrangement of the arrow head (931-939) of a screen display 940.

[0017] Drawing 11 is the flow chart of division image display data message distribution processing when the image data manipulation carbon button (931-939) currently displayed on drawing 9 or a numerical keypad (950-959) is pushed. If the image data manipulation carbon button 931 of the information terminal 130 is pushed, data distribution equipment 100 will receive a screen data distribution demand (step 1120). The data distribution equipment 100 which received the demand transmits the screen data 1040 created at step 780 of drawing 7 to the information terminal 130 (step 1130).

[0018] Moreover, division display processing becomes possible only within the information terminal 130 by transmitting the screen data for a division display created at step 780 of drawing 7 to the information terminal 130 at step 790. In this case, if the image data manipulation carbon buttons 931-939 of drawing 9 are pushed, it will set up so that the screen data for a division display transmitted to the information terminal 130 instead of a data Request to Send to data distribution equipment 100 may be called.

[0019] With the gestalt of this operation, when a display screen displayed an image on a small information terminal, a manual operation button with which an expansion image is seen was added, and the method displayed on an information terminal was shown. Thereby, the detail of an image comes to be seen also at an information terminal with the small display screen. Moreover, since data distribution equipment is performing creation of a division display screen, it is not necessary to prepare the image data for a division display for a data server.

[0020] Drawing 12 is a data distribution structure-of-a-system Fig. It can connect with data distribution equipment 1230 via the cellular-phone network 1220 and the Internet 1221, and a cellular phone 1210 can see the information on data distribution equipment 1230. Moreover, network connection of the data distribution equipment 1230 is carried out to the Internet 1221, and it is connected with the dialup router 1240 by the serial cable. It connects with the dialup router 1241 by telephone-line 1222 course, and the dialup router 1240 can perform data communication. Therefore, data distribution equipment 1230 can acquire the image of a camera 1260 from the camera server 1250 via the dialup router 1240 and the dialup router 1241. If it is this configuration, the image data of the camera server 1250 which are not connected with a cellular phone 1210 in a network are acquirable by data distribution server 1230 course.

[0021] Hereafter, the User Information registration processing and image message distribution processing about the processing which transmits the image of this camera 1260 to a cellular phone 1210 are explained.

[0022] User Information 1300 in which data distribution equipment 1230 stores drawing 13 , and drawing 14 are the flow charts of the User Information registration processing 1400 in which User Information 1300 is registered from a cellular phone 1210 to data distribution equipment 1230. If it connects with data distribution equipment 1230 using an Internet connectivity function from a cellular phone 1210 and a new registration demand is performed (step 1410), data distribution equipment 1230 will transmit a registration screen to a cellular phone 1210 (step 1420). As contents registered here, they are user ID 1320, a password 1330, the dispatch first-move number 1340, a circuit class 1350, the name 1361 of a connection place, the connection

place address 1362, and connection place camera server classification 1363 grade. When a cellular phone 1210 connects with data distribution equipment 1230, a terminal ID 1310 is data which data distribution equipment 1230 receives, and is the information which can specify the cellular phones 1210, such as the telephone number of a cellular phone 1210, and a terminal number of a cellular phone 1210, as a meaning. When not receiving such a terminal ID 1310, nothing is registered but a user is specified only with user ID and a password. In addition, drawing 15 explains the operation of these information. And if the contents of registration are received (step 1430), the connection first-move number 1340 and the connection place address 1362 which were registered will check whether it is the right (step 1440). A symptom telephones the registered connection first-move number 1340 using the dialup router 1240, establishes a data communication way, and checks whether the connection place address 1362 and connection are possible. It checks whether as a connectable symptom, the GING command is published, for example from data distribution equipment 1230 to the connection place address 1362, and there is any response. When connection cannot be checked, (step 1450, No), and a connection failure message are sent to a cellular phone 1210 (step 1470), and a registration screen is transmitted to a cellular phone 1210 once again (step 1420). If connection can be checked by the connection confirm (step 1450, Yes), a registration completion message will be transmitted to a cellular phone (step 1460), and the User Information registration processing 1400 will be ended.

[0023] Drawing 15 is the flow chart of the image message distribution processing 1500 which data distribution equipment 1230 performs. If a connection request arrives from a cellular phone 1210 (step 1510), the input screen of user ID and a password will be sent to a cellular phone 1210 (step 1520). Since the input screen of user ID and a password is displayed on a cellular phone 1210, if the user of a cellular phone 1210 inputs them and transmits data, data distribution equipment 1230 will receive user ID and a password (step 1530). As compared with the user ID 1320 of User Information 1300, and a password 1330, it judges whether it is the right for the user ID and the password which were received (step 1535). Although the user of a cellular phone 1210 is judged with user ID and a password here, a user may be specified at a terminal ID 1310. However, when a user is specified at a terminal ID 1310, if the cellular phone is used, the image of a camera 1260 can be seen also by whom. Moreover, security can be raised if a user is judged at user ID, a password, and Terminal ID. If user ID or a password is not right (step 1535, No), the input screen of user ID and a password is transmitted to a cellular phone 1210 once again (step 1520). If user ID and a password are right (step 1535, Yes), the name list of the connection place 1 registered - the connection places 3 (1361, 1371, 1381) will be displayed (step 1540). The user of a cellular phone 1210 chooses a place to connect out of the name list of the connection place 1 - the connection places 3 (1361, 1371, 1381). Here, if the connection place 1 is chosen with a cellular phone 1210, the message (namely, camera image demand message) which tells that the connection place 1 was chosen will be received (step 1550). Data distribution equipment 1230 telephones the connection first-move number 1340 registered using the dialup router 1240, and a communication line with the dialup router 1241 is established (step 1560). And data distribution equipment 1230 acquires a camera image acquisition demand from camera server 1250a which is the connection place 1 about the image of delivery and camera 1260a to the address 1362 of the connection place 1 (step 1570). At the connection place 1 (1360), since the camera server classification 1363 serves as cam01, an image is acquired using the image acquisition approach doubled with cam01. For example, when cam01 is a WWW server, a http protocol is used and data distribution equipment 1230 acquires image data from camera server 1250a. Image data are changed when the image data acquired from camera server 1250a are the format which cannot be displayed with a cellular phone 1210 (step 1580). And image data are transmitted to a cellular phone 1210 (step 1590).

[0024] According to the gestalt of this operation, the image of the camera connected to the camera server which is not connected to the Internet from the cellular phone which can access the Internet can be seen. Usually, data distribution equipment acquires an image from the camera server connected with the Internet, performs image transformation, and sends data to a cellular phone. However, in order to connect a camera server to the Internet, the always-on connection charge and the telex rate to the Internet are needed. With the gestalt of this operation, only when there is an image acquisition demand from a cellular phone, in order to connect a circuit and to transmit data, connection charge and a telex rate become very cheap. Moreover, if the gestalt of this the operation of this is used, it will become possible to see the image of the individual camera which is not connectable with the Internet from a cellular phone. Moreover, according to the gestalt of this operation, it becomes possible only by registering required information from a cellular phone etc. to see the image of the camera which is not connected to the Internet with a cellular phone.

[0025]

[Effect of the Invention] The image data which the information terminal does not support can also be seen by changing into the image format that the information terminal 130 corresponds, automatically, and transmitting data to it. Moreover, the detail of image data can be seen also at the small information terminal of a display screen.

[Translation done.]

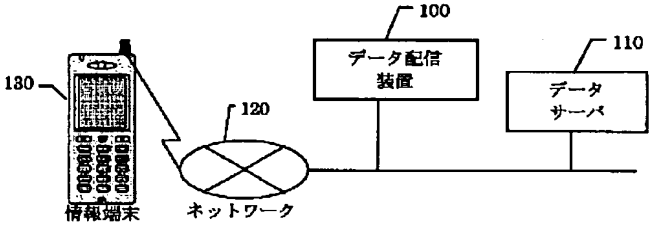
* NOTICES *

1.This document has been translated by computer. So the translation may not reflect the original precisely.
2.**** shows the word which can not be translated.
3.In the drawings, any words are not translated.

DRAWINGS

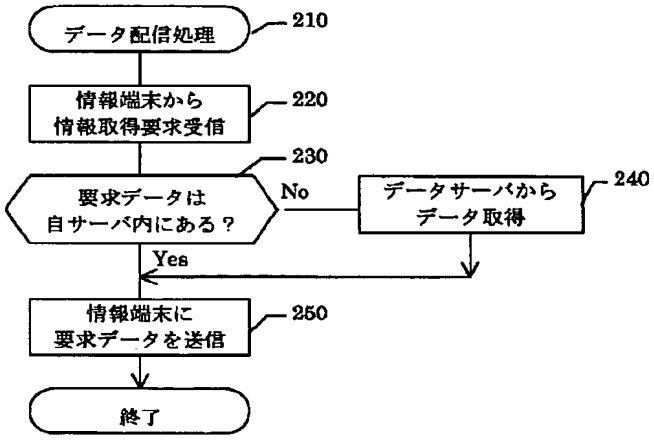
[Drawing 1]

図1



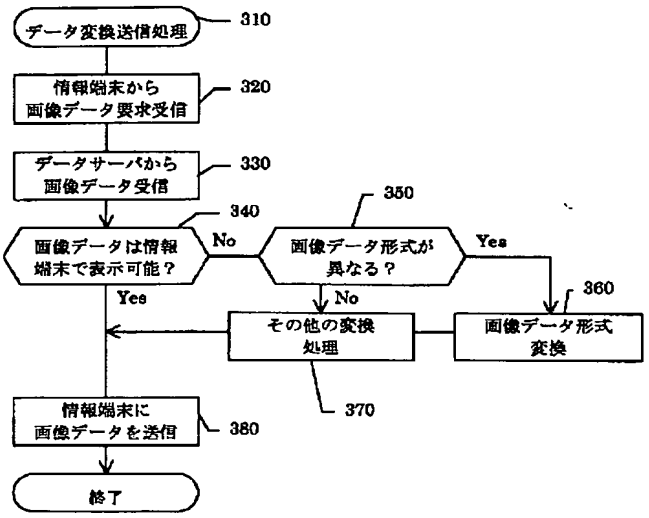
[Drawing 2]

図2



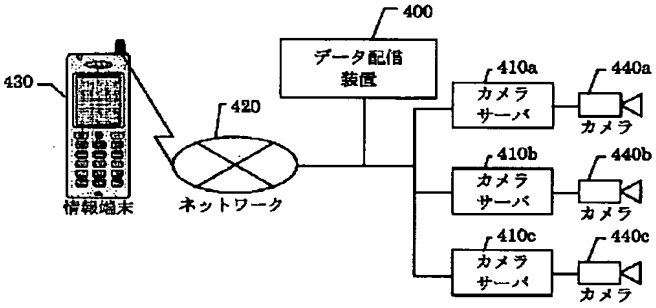
[Drawing 3]

図３



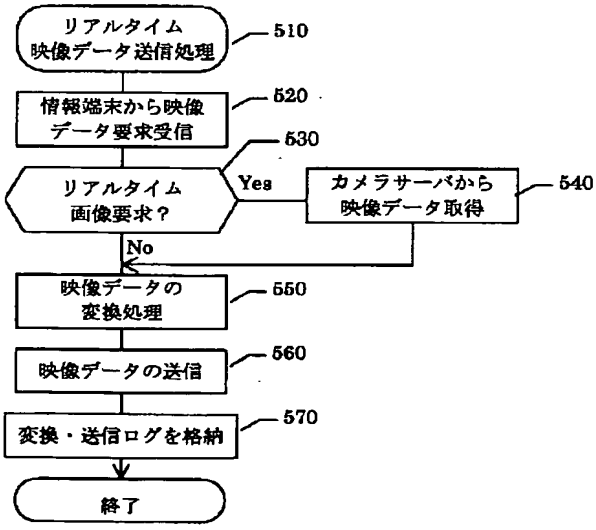
[Drawing 4]

図４



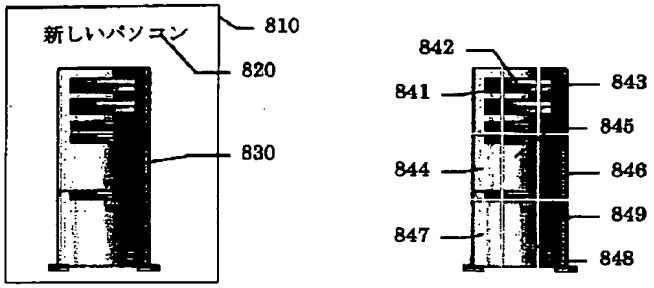
[Drawing 5]

図５



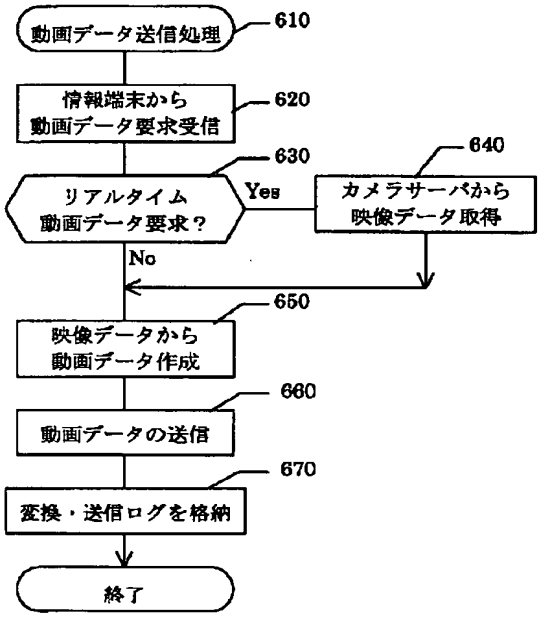
[Drawing 8]

図８



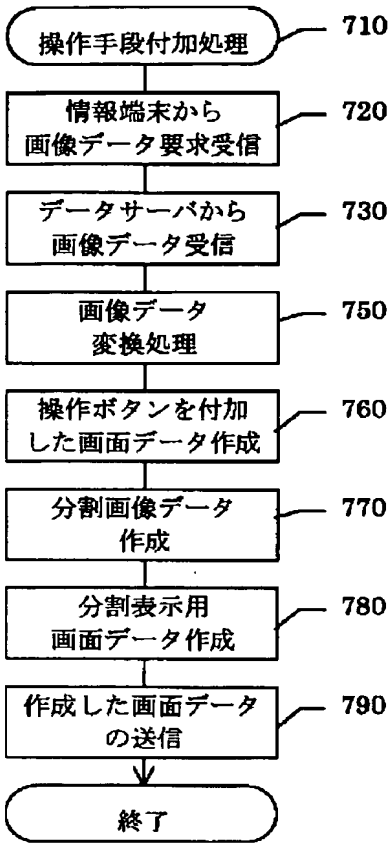
[Drawing 6]

図６



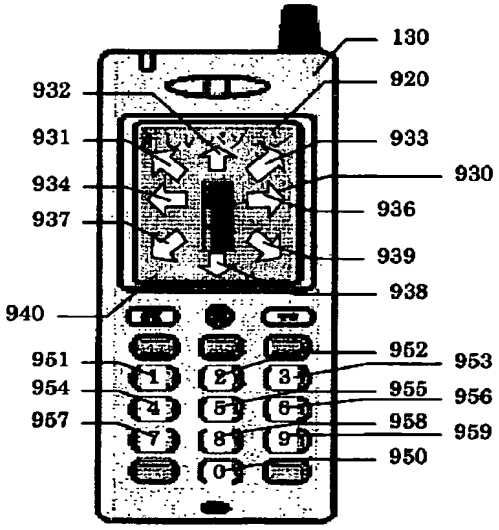
[Drawing 7]

図 7



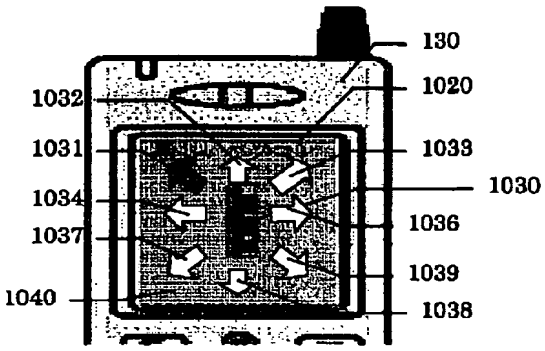
[Drawing 9]

図 9



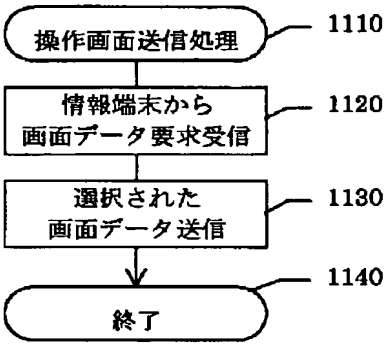
[Drawing 10]

図１０



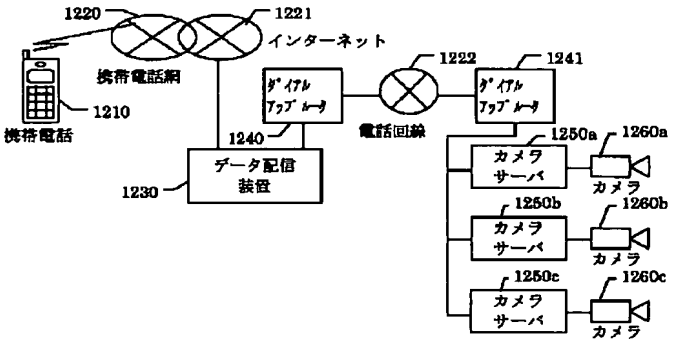
[Drawing 11]

図１１



[Drawing 12]

図１２



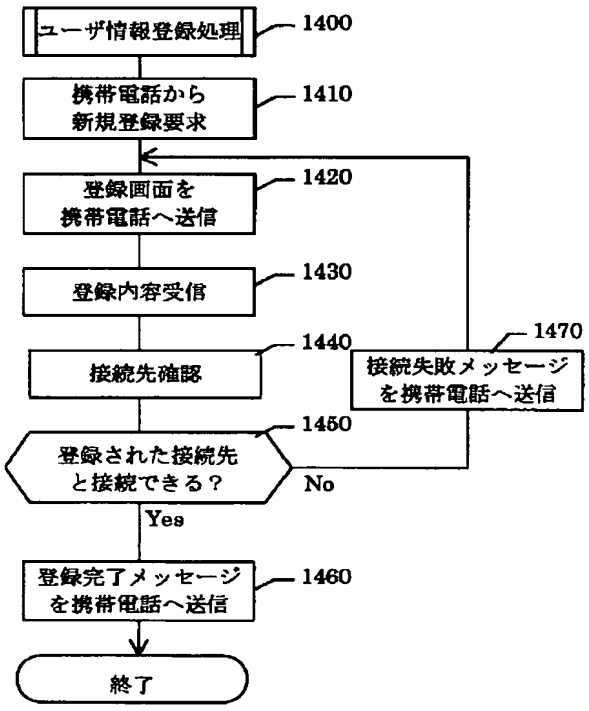
[Drawing 13]

図１３

1300				
1310	端末ＩＤ	1234445554		
1320	ユーザＩＤ	ＡＢＣＤ		
1330	パスワード	１２３４		
1340	接続先番号	03-3123-4567		
1350	回線種別	ＩＳＤＮ		
1360	接続先１	名称	東京１	1361
		アドレス	192.168.1.50	1362
		ｶﾒﾗｻｰﾊﾞ種別	cam01	1363
1370	接続先２	名称	東京２	1371
		アドレス	192.168.1.55	1372
		ｶﾒﾗｻｰﾊﾞ種別	cam03	1373
1380	接続先３	名称	横浜１	1381
		アドレス	192.168.1.60	1382
		サーバ種別	cam11	1383

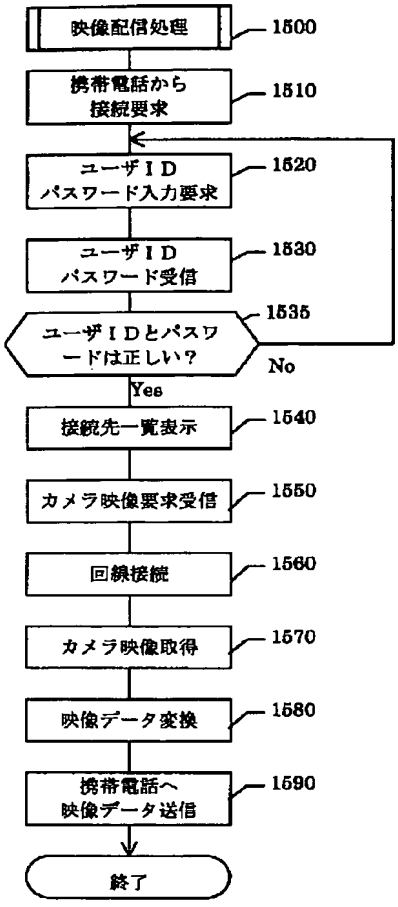
[Drawing 14]

図１４



[Drawing 15]

図１５



[Translation done.]